Introduction and Survey Objectives

In 2016, the Department of Natural Resources conducted a three night fyke netting survey of School Section Lake in order to provide insight and direction for the future fisheries management of this water body. Primary sampling objectives of this survey are to characterize species composition, relative abundance and size structure. The following report is a brief summary of the activities conducted, general status of fish populations and future management options.

Acres: 39   **Shoreline Miles:** 1.5   **Maximum Depth (feet):** 38
Lake Type: Headwater   **Public Access:** 1 public access
Regulations: 25 Panfish may be kept, but only 10 of any one species, all other species follow Statewide Default Regulations.

WISCONSIN DNR CONTACT INFO.

Elliot Hoffman - Fisheries Technician

Wisconsin Dept. of Natural Resources
647 Lakeland Rd.
Shawano, WI 54166

Elliot Hoffman Phone: 715-526-4231
E-mail: elliot.hoffman@wisconsin.gov

Survey Information

Site location	Survey Dates	Water Temp. (F)	Target Species	No. of Nets	Gear	Net nights
School Section Lake	4/20/2016 - 4/23/2016	58 - 62	Panfish	3	Fyke Net	9

Survey Method

- School Section Lake was sampled according to spring netting (SNII) protocols as outlined in the statewide lake assessment plan. In this particular survey we were collecting panfish data for the special panfish regulations that have gone into effect for roughly 100 lakes throughout Wisconsin. School section has a regulation of 25 panfish may be kept but only 10 of any one species.

- Fyke nets were deployed in areas of the lake that appeared suitable for panfish species. All fish captured were identified to species and measured for length. A subsample of fish were weighed and age structures collected for age and growth analysis.

- Fish metrics used to describe fish populations include proportional stock density, catch per effort, length frequency distribution and mean age at length.

Fish Metric Descriptions
PSD, CPUE, LFD and Growth

Proportional Stock Density (PSD) is an index used to describe size structure of fish. It is calculated by dividing he number of quality size fish by the number of stock size fish for a given species. PSD values in the 40 to 60 percent range generally describe a balanced fish population.

Catch per unit effort (CPUE) is an index used to measure fish population relative abundance which simply refers to the number of fish captured per unit of distance or time. For netting surveys we typically quantify CPUE by the number and size of fish per net night. CPUE indexes are compared to statewide data by percentiles and within lake trends. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state.

Length frequency distribution (LFD) is a graphical representation of the percentage of fish captured by one inch size intervals.   Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or sampling gear limitations.

Mean Age at Length is an index used to assess fish growth. Growth structures (otoliths, spines, or scales) are collected from a specified length bin of interest (e.g. 7.0-7.5 inches for bluegill). Mean age is compared to statewide data by percentile with growth characterized by the following benchmarks: slow (<33rd percentile); moderate (33rd to 66th percentile); and fast (>66th percentile).

Size Structure Metrics

Species	Total	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock No	Quality No	PSD	Percentile Rank	Size Rating
BLUEGILL	68	6.3	4.6 - 8.7	3.0 and 6.0	68	44	65%	60th	Moderate
BLACK CRAPPIE	104	7.2	5.6 - 11.4	5.0 and 8.0	104	15	14%	10th	Low
LARGEMOUTH BASS	12	14.7	11.4 - 17.2	8.0 and 12.0	12	11	92%	80th	Moderate - High
NORTHERN PIKE	29	18.7	13.5 - 38.1	14.0 and 21.0	27	2	11%	8th	Low

Abundance Metrics

Species	CPUE Total	Percentile Rank	Overall Abundance Rating
BLUEGILL	7.6	44th	Moderate
BLACK CRAPPIE	11.6	77th	Moderate - High
LARGEMOUTH BASS	1.3	81st	Moderate - High
NORTHERN PIKE	3.2	72nd	Moderate - High

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Black Crappie Length Distribution — N = 104

Bluegill Length Distribution — N = 68
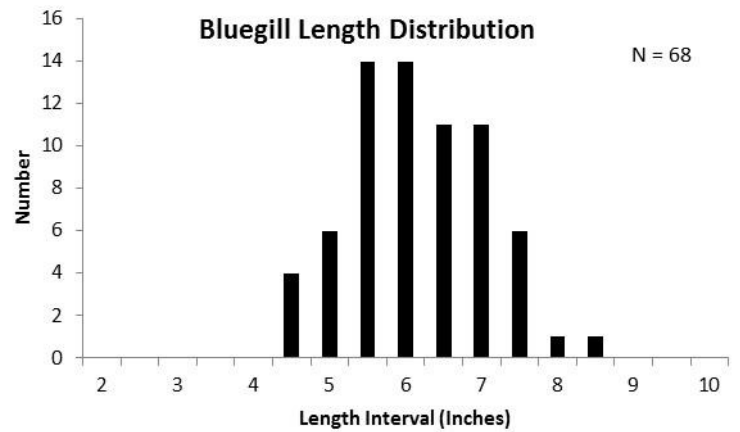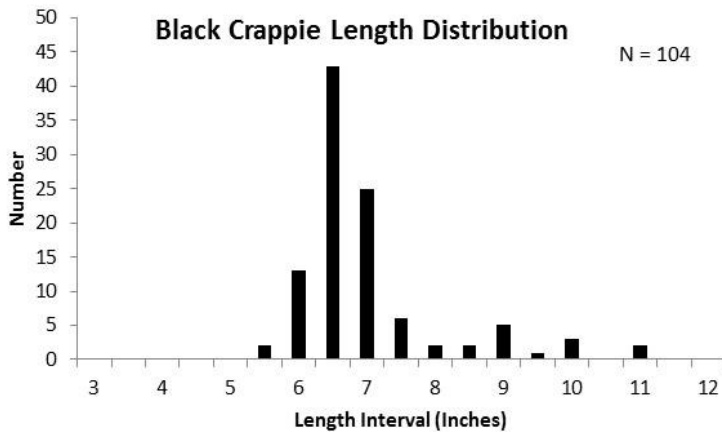
Growth Metrics

Species	Total (N)	Age (years)	Mean Length	Length Range	Percentile Rank	Growth Rating
BLACK CRAPPIE	15	2	**6.9**	6.1 - 7.6	98th	Fast
BLACK CRAPPIE	15	3	8.9	6.4 - 10.2	83rd	Moderate - Fast

Management Options

This survey was primarily intended to assess panfish populations. Other species are captured but different survey techniques are typically used to better assess their population metrics. Therefore, management recommendations are focused on bluegill and black crappie.

Panfish

- Panfish size structures were found at moderate levels. Black crappies are recovering from a large scale die off in 2014, while bluegill size structure is at an average level.

- Management Objective: Maintain bluegill size structure and relative abundance at moderate levels.

- Management Action: A special panfish regulation was put in place in 2016 to protect some of the larger panfish from harvest and maintain the size structure of the population.

Other Management Objectives:

- Currently, School Section Lake is on an 8 year sampling rotation. The DNR sampled School Section Lake for the experimental panfish regulations that were put into place in the spring of 2016. In addition to the special SNII netting survey the DNR also conducted fall electrofishing and netting surveys as well.

- A large portion of shoreline is undeveloped and the littoral areas of the lake are relatively narrow and confined making them particularly susceptible to disturbance while spawning. Protection of this important part of the lake is crucial to maintaining panfish populations.

Summary

- A total of 446 fish in 8 species were collected during our surveys. The most frequently encountered and common species were yellow bullhead (185), black crappie (104), bluegill (68), and black bullhead.

- All fish captured were native species.

- Other fish species sampled in low abundance included northern pike (29), yellow perch (15), largemouth bass (12), and pumpkinseed (3).

- Northern Pike was the dominant gamefish captured in our survey. We suspect a good population of largemouth bass to be present, but electrofishing would be a more appropriate sampling gear for bass.

- Moderate to high numbers of panfish were sampled. Bluegill size structure was at above average levels, while black crappie size structure is a little below average.

- Panfish populations were mainly comprised of bluegill, black crappie, pumpkinseed, and yellow perch. Bluegill were found in moderate density and showed above average size structure with 65% of the catch greater than 6.0 inches and 28% greater than 7.0 inches. Black crappie were found in above average abundance but showed below average size with only 14% of the catch greater than 8.0 inches. Black crappie growth was fast when compared to statewide data.

- School Section Lake has historically supported a quality black crappie fishery. In the spring of 2014 we documented a large die-off which we suspected was caused from an outbreak of Columnaris, a common spring bacterial infection in fish populations. We have been ble to sample an increased number of black crappie since the die-off. Black crappies are rebounding, and within a few years should be reaching harvestable size.